IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): Method of determining ~~the~~ a transmission power of transmitted pilot symbols used for estimating channel coefficients[[,]] by replacing useful signals[[,]] in a transmission frame of a multicarrier transmission system with ~~spreading of the signal in the~~ OFDM-CDMA, MC-CDMA, MC-CDM or MC-SS-MA frequency domain ~~by~~ spreading sequences ~~of the OFDM-CDMA, MC-CDMA, MC-CDM or MC-SS-MA type, the said pilot symbols being used for estimating the channel coefficients, characterised in that it includes the following steps~~ the method comprising:

a) determining a performance level to be achieved by the transmission[[,]];

b) deducing~~, from the said performance level to be achieved,~~ the signal to noise ratio level introduced by the channel[[,]] from the performance level to be achieved;

c) deducing a single code transmission power Q_0 of the pilot symbols for a single spreading code from the signal to noise ratio level ~~on the one hand the transmission power of the said pilot symbols or single spreading code allocated and on the other hand the~~;

d) deducing an increase in power ~~which it is necessary to give to the said~~ α for transmitting the pilot symbols ~~for the following allocated~~ using a number of spreading codes[[,]]K; and

[[d)]] e) determining, at ~~each of the~~ predetermined times, ~~according to the number of spreading codes used at this time,~~ the transmission power Q of the ~~said~~ pilot symbols ~~by means of~~ based on the following ~~equation~~ equations:

~~$Q = \alpha(K-1) + Q_o$; $K \geq 1$, $\alpha > 0$ and $Q_o > \alpha$ (8)~~

$Q = \alpha(K-1) + Q_0$,

$K > 1$,

$\alpha > 0$, and

$\underline{Q_0 > \alpha}$.

Claim 2 (Currently Amended): Method of determining the transmission power of pilot symbols according to Claim 1, ~~characterised in that, in order to determine the said signal to noise ratio level introduced by the channel, it includes the following steps~~

~~a) deducing, from the said performance level to be achieved, the signal to noise ratio level introduced by the corresponding channel for a channel estimation deemed to be perfect, and~~ further comprising:

determining an ideal signal to noise ratio for a perfect channel estimation at the performance level to be achieved; and

[[b)]] obtaining the signal to noise ration by increasing the ~~said~~ ideal signal to noise ratio level ~~thus deduced~~ by a predetermined quantity ~~which it is possible to tolerate in order~~ to compensate for ~~the~~ degradations in the performance level to be achieved resulting from an imperfect channel estimation.

Claim 3 (Currently Amended): Method of determining the transmission power of pilot symbols according to Claim 1 ~~or 2, characterised in that the transmission power of the pilot symbols for a single spreading code allocated and the increase in power which it is necessary to give to the said pilot symbols for the following allocated spreading codes are determined so as to keep the performance level to be achieved identical to that which would be achieved in the case of perfect estimation~~ , further comprising:

deducing the single code transmission power Q_0 and the increase in power α such that the performance level to be achieved is a same level for a perfect channel estimation and an imperfect channel estimation.

Claim 4 (Currently Amended): Method of determining the transmission power of pilot symbols according to ~~one of the preceding claims, characterised in that~~ claim 1, further comprising:

calculating the single code transmission power Q_0 ~~of the said pilot symbols for a single allocated spreading code~~ and the increase in power ~~which it is necessary to give to the said pilot symbols for the following allocated spreading codes are determined by means of~~ α according to the following equations:

$$\alpha = \frac{1}{\gamma\lambda} \quad \text{and}$$

$$Q_0 = \frac{N\sigma_0^2 + 1}{\gamma\lambda(\lambda - 1)} + \frac{1}{\gamma\lambda}$$

wherein the multicarrier transmission system includes a MC-CDMA transmission system, ~~where~~ N is ~~the~~ a number of carriers used in the ~~said~~ MC-CDMA transmission system, γ is ~~the~~ a smoothing gain used in ~~the~~ a detection process, λ is a factor representing ~~the~~ an increase in signal to noise ratio ~~of the~~ between a perfect channel ~~which it is possible to tolerate~~ estimation and an imperfect channel estimation, and σ_0^2 ~~the~~ is a variance of ~~the~~ total interference ~~taking into account on the one hand the noise introduced by the channel for a channel estimation deemed to be perfect and on the other hand the channel estimation error~~ between the perfect channel estimation and the imperfect channel estimation.

Claim 5 (New): The method of claim 1, wherein the performance level to be achieved includes a mean bit error rate (BER).

Claim 6 (New): The method of claim 2, further comprising:

deducing the single code transmission power Q_0 and the increase in power α such that the performance level to be achieved is a same level for the perfect channel estimation and the imperfect channel estimation.

Claim 7 (New): Method of determining the transmission power of pilot symbols according to claim 2, further comprising:

calculating the single code transmission power Q_0 and the increase in power α according to the following equations:

$$\alpha = \frac{1}{\gamma\lambda} \quad \text{and}$$

$$Q_0 = \frac{N\sigma_0^2 + 1}{\gamma\lambda(\lambda - 1)} + \frac{1}{\gamma\lambda}$$

wherein the multicarrier transmission system includes a MC-CDMA transmission system, N is a number of carriers used in the MC-CDMA transmission system, γ is a smoothing gain used in a detection process, λ is a factor representing an increase in signal to noise ratio between the perfect channel estimation and the imperfect channel estimation, and σ_0^2 is a variance of total interference between the perfect channel estimation and the imperfect channel estimation.